This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A wireless communication unit comprising:

a dual-port modulator for generating a radio frequency signal to be used by the wireless communication unit;

a data generator, operably coupled to the dual-port modulator, for generating data to be transmitted;

a digital to analogue converter, operably coupled to the data generator for converting the digital data to an analogue signal to be used in generating the radio frequency signal; and

an attenuator, operably coupled to the digital to analogue converter to attenuate the analogue signal output from the digital to analogue converter;

the wireless communication unit characterised by:

a signal processor operably coupled to the attenuator for setting an attenuation value of the attenuator to balance signals input to two ports of said dual-port modulator.

2. (currently amended) The wireless communication unit according to claim 1, further characterised by said signal processor storing one or more attenuation values for a frequency or range of frequencies of said ~~radio frequency generation circuit~~ dual-port modulator, such that a set of attenuation values can be used to more accurately attenuate said analogue signal level output from said digital to analogue converter dependent on the signal frequency generated by the wireless communication unit.

3. (original) The wireless communication unit according to Claim 1, further characterised by said attenuation value selected by said processor being of a form:

$$\mathrm{ATT\_dB} + \cdot \mathrm{K_S}\_dB = 20 \bullet \log 10\left(\frac{N_{ch} \cdot \Delta f_{dev\max}}{K_0 V_{DAC\,\mathrm{Peak}}}\right)$$

4. (original) The wireless communication unit according to Claim 1 wherein said attenuation level is selected by said processor to counteract any port mismatch dependent upon a determined phase error RMS difference between said ports.

5. (original) The wireless communication unit according to Claim 1, wherein the wireless communication unit is one of a portable or mobile (PMR) radio, a mobile phone, a personal digital assistant, a wireless capable laptop computer.

6. (original) A method of tuning a dual-port modulator of a radio frequency signal in a wireless communication unit, the method characterised by the following steps:

generating a channel frequency;

sampling the generated channel frequency;

storing a sampled value of the generated channel frequency in an array;

adjusting a channel frequency being sampled;

repeating the steps of generating, sampling, storing and adjusting, until selected channel frequencies have been sampled;

calculating attenuation values from the sampled values stored in the array(s); and

controlling a signal level of a digital to analogue converter output to balance signals input to two ports of said dual-port modulator.

7. (original) The method of tuning a dual-port modulator according to Claim 6, wherein the step of controlling is performed to balance a phase error RMS imbalance between said two ports of said dual-port modulator.

8. (original) The method of tuning a dual-port modulator according to Claim 6, wherein said steps of calculating and controlling are performed for particular frequency ranges of said wireless communication unit.

9. (original) The method of tuning a dual-port modulator according to Claim 6, the method further characterised by the step of:

introducing a delay before said step of sampling to compensate for a group delay between said two ports of said dual-port modulator.

10. (original) A wireless communication unit according to Claim 1, capable of operating in the global system for mobile communications system.

11. (original) A method of tuning a dual-port modulator according to Claim 6, applied to a mobile phone capable of operating in the global system for mobile communications system.

12. (original) A storage medium storing processor-implementable instructions for controlling a processor to perform a method of tuning a dual-port modulator of a radio frequency signal in a wireless communication unit, the method comprising the following steps: generate a channel frequency; sample the generated channel frequency; store a sampled value of the generated channel frequency in an array; adjust a channel frequency being sampled; repeat the steps of generating, sampling, storing and adjusting, until selected channel frequencies have been sampled; calculate attenuation values from the sampled values stored in the array(s); and control a signal level of a digital to analogue converter output to balance signals input to two ports of a dual-port modulator.

13. (original) A storage medium according to Claim 12, wherein the step of controlling is performed to balance a phase error RMS imbalance between said two ports of said dual-port modulator.

14. (original) A storage medium according to Claim 12, wherein said steps of calculating and controlling are performed for particular frequency ranges of said wireless communication unit.

15. (original) A storage medium according to Claim 12, wherein a delay is introduced before said step of sampling to compensate for a group delay between said two ports of said dual-port modulator.